<u>EDITORIAL NOTE</u>: The **reference date** is the date of diagnosis with acute lymphoblastic leukemia (ALL), for a case; for the individually matched control, it is the reference date of the associated case. The **reference date age** is the age of the case or matched control on his or her reference date.

EMF AND RADON STUDY

SECTION A: HOUSEHOLD EXPOSURES

I would now like to ask about certain types of electrical appliances you may have used during your pregnancy with (SUBJECT).

(5)	JBJECT).			
wit	A1. ring your pregnancy h (SUBJECT), did you e (ITEM)?	A2. During how many months of that pregnancy did you use (ITEM)? [Please include each month in which you used it at least once.]	A3. During (that/those) month(s), did you use (ITEM)?	A4. During (that/those) month(s), how many minutes or hours per day or week did you usually use (ITEM)?
a.	A heating pad? YES1 NO2 (A1b)	 # MONTHS	Every day,	
b.	A sewing machine? YES1 NO2 (A1c)	 # MONTHS	Every day,	
C.	A hair dryer at home or in a beauty salon? YES1 NO2 (A1d)	 # MONTHS	Every day,	
d.	A curling iron at home or in a beauty salon? YES	 # MONTHS	Every day,	
e.	An electric ceiling fan? YES1 NO2 (A1f)	 # MONTHS	Every day,	

A5. When you used (ITEM), did you usually turn down the heat in your home while you were sleeping?	A6. [ONLY ASK IF # MONTHS IN A2 < 7]: When you used (ITEM), did you use it during your(CIRCLE ALL THAT APPLY)		
	a. 1st trimester?		
	a. 1st trimester?		
	a. 1st trimester?		
	a. 1st trimester?1 b. 2nd trimester?2 c. 3rd trimester?3		
	a. 1st trimester?1b. 2nd trimester?2c. 3rd trimester?3		

A1. During your pregnancy with (SUBJECT), did you use (ITEM)?	A2. During how many months of that pregnancy did you use (ITEM)? [Please include each month in which you used it at least once.]	A3. During (that/those) month(s), did you use (ITEM)?	A4. During (that/those) month(s), how many minutes or hours per day or week did you usually use (ITEM)?
f. A cool-air or ultrasonic		Every day,1	

	room humidifier?	# MONTHS	At least once a week or2	
	YES1 NO2 (A1g)		Less than once a week?3	
g.	A sound system while using a headset, including a portable radio, tape player, CD player or stereo? YES	 # MONTHS	Every day,	
h.	A stereo sound system without using a headset? YES	 # MONTHS	Every day,	
i.	An electric blanket while lying or sleeping in bed? YES	 # MONTHS	Every day,	# MINS
j.	An electric mattress pad while lying or sleeping in bed? YES	 # MONTHS	Every day,	# MINS
k.	An electric water bed heater? YES1 NO2 (A7)	 # MONTHS	Every day,	_ # MINS

ΛE	۸۶
A5. When you used (ITEM), did you usually turn down the heat in your home while you were	A6. [ONLY ASK IF # MONTHS IN A2 < 7]: When you used (ITEM), did you
sleeping?	use it during your(CIRCLE ALL THAT APPLY)
	a. 1st trimester?1
	b. 2nd trimester?2
	c. 3rd trimester?3
	a. 1st trimester?1
	b. 2nd trimester?2
	c. 3rd trimester?3
	a. 1st trimester?1
	b. 2nd trimester?2
	c. 3rd trimester?3
	a. 1st trimester?1
YES1	b. 2nd trimester?2
NO2	c. 3rd trimester?3
	a. 1st trimester?1
YES1	b. 2nd trimester?2
NO2	c. 3rd trimester?3
	a. 1st trimester?1
YES1 NO2	b. 2nd trimester?2
	c. 3rd trimester?3

A7.	During your preq were sleeping?	gnancy with (SUBJECT), was ar	n electric clock or	clock radio	located within 3 fe	et of where you
		YES		1		
		NO			(A9)	
A8.	Did this clock ha	ave a digital or dial display?				
		DIGITAL		1		
		DIAL				
A9.	During your pre	gnancy with (SUBJECT), did yo	u use a microwa	ve oven?		
		YES		1		
		NO			(A11)	
A10.	On the average	, did you use the microwave ove	en			
		More than once a day,		1		
		Once a day,				
		At least once a week of				
		Less than once a weel	k?	4		
A11.	-	TV during your pregnancy with (sease include the situations listed			MO YR	china
	MO YR	relative's home or anywhere els				
		nnected to a TV or playing elec				
	SHOW CARD A	4				
	-	_ YES		1		
		NO			(A25)	
A12.		uations listed on this card, how mgnancy with (SUBJECT)? [Rem			or week did you u	sually watch TV
	SHOW CARD A	.				
	SHOW CARD A	 #	MIN 1 HRS 2	PER	DAY1 WK2 MO3	
		BOX A.				
		< 10 MINUTES PER DAY OR < PER WEEK OR < 4 HOURS PEI		1 (A2	25)	
	ALL ELS	SE		2 (IN	TRO	
				`	FORE	
				A1	3)	

			television set that you wate is card when answering		ring your pr	egnancy with (SUBJECT). Plea	se
A13.	Was th	nis a black-and-wl	nite or color television?				
	SHOW	/ CARD A	BLACK-AND-WHITE				
A14.	What v	was the size of the	e TV screen?				
	SHOW	/ CARD B					
	A. B. C. D. E.	9 INCHES 13 INCHES 19 INCHES 26 INCHES	IFY)		2 3 4 5	(A16) (A16)	
A15.		you were watchin plug it into an ele		egnancy, was it m	nore often p	powered with batteries or did yo	эu
			BATTERIES ELECTRICITY OTHER (SPECIFY)		2		
A16.		best of your kno ancy with (SUBJE		s television at the	time that y	you were watching it during yo	ur
			Less than 5 years old, 5 to 10 years old or More than 10 years old?		2		
A17.			ours per day or week did y er to include weekends.]		or sit near tl	his TV during your pregnancy w	ith
				MIN 1 HRS 2	PER	DAY1 WK2 MO3	
A18.	How fa	ar did you usually	sit from this TV? Was it				
			Less than 4 feet,4 to 6 feet or		2		
			BOX B.				
		MOST WATCHE	D TV IN A13 WAS COLO	OR	1 (A19	9)	
		MOST WATCHE	ED TV IN A13 WAS BLAC	CK-AND-WHITE			

A19.		ng the situations list egnancy with (SU		ı watch a black-and	d-white telev	ision set on a regular basis during
	SHOW	CARD A	YES			(A25)
A20.	What w	as the size of the	e TV screen?			
	SHOW	CARD B				
	A. B. C. D. E.	9 INCHES 13 INCHES 19 INCHES 26 INCHES	IFY)		2 4 5	(A22)
A21.		ou were watching plug it into an ele		regnancy, was it n	more often p	owered with batteries or did you
			BATTERIESELECTRICITYOTHER (SPECIFY) _		2	
A22.		best of your kno ncy with (SUBJE		nis television at the	e time that y	ou were watching it during your
			Less than 5 years old, 5 to 10 years old or More than 10 years old		2	
A23.			ours per day or week did er to include weekends		or sit near th	nis TV during your pregnancy with
				MIN 1 HRS 2	PER	DAY1 WK2 MO3
A24.	How fa	r did you usually	sit from this TV? Was it			
			Less than 4 feet,4 to 6 feet or		2	
A25.	or com	puter terminal wi				ou use a personal computer (PC) Please include computers used
			YES			(A32)

A26.	During your pregnancy, how many minutes or hours per day or week did you use a computer? Please include the time you spent sitting within 3 feet of a computer while the monitor was on, whether or not you were actually using it. [Remember to include weekends.]							
	_ MIN 1 PER DAY 1 # HRS 2 WK 2 MO 3							
A27.	Did you use more than one computer on a regular basis during your pregnancy with (SUBJECT)?							
	YES							
[READ (SUBJE	IF A27 = 1: Now I'd like to ask you about the computer you used the most during your pregnancy with ECT).]							
A28.	Was the monitor on (the computer you used/this computer) a monochrome or a color monitor? (By monochrome we mean that only one color is displayed on the screen, usually white, green or amber on a black background. With a color monitor, you can select the color that your screen displays and you can display more than one color at a time.)							
	MONOCHROME							
	BOX C.							
	A26 IS < 10 MINUTES PER DAY OR < 60 MINUTES PER WEEK OR < 4 HOURS PER MONTH OR A27 = 2 (NO OR DON'T KNOW)							
	ALL ELSE							
A29.	During your pregnancy with (SUBJECT), how many minutes or hours per day or week did you usually use this computer? Please include the time you spent sitting within 3 feet of this computer while the monitor was on, whether or not you were actually using it. [Remember to include weekends.]							
	MIN 1 PER DAY 1 # HRS 2 WK 2 MO 3							
[READ Now I v	ONLY IF A27 = 1: otherwise skip to intro of A32] would like to ask you the same series of questions about the computer you used the second most frequently.							
A30.								
	Was the monitor on this computer a monochrome or a color monitor?							
	Was the monitor on this computer a monochrome or a color monitor? MONOCHROME							
A31.	MONOCHROME1							
A31.	MONOCHROME							
Now, I	MONOCHROME							

MO YR				
A32. [From (SUBJECT'S) birth until (REFERENCE DATE,/)], did MO YR (he/she) ever use (ITEM)?	A33. At what age did (he/she) start using the (ITEM)?	A34. At what age did (he/she) stop using the (ITEM)?	A35. When (SUBJECT) used (ITEM), did you usually turn down the heat in your home while (he/she) was sleeping?	BOX D. INTERVIEWER: SKIP ACCORDING TO REFERENCE DATE AGE AND AGES SPECIFIED IN A33. AND A34.
a. An electric blanket while lying or sleeping in bed? YES1 NO2 (A32b)	_ AGE <1 YEAR00	 AGE < 1 YEAR 00 STILL USING88	YES1 NO2	AGE STOPPED USING IS YOUNGER THAN REFERENCE DATE AGE OR DON'T KNOW AGE STARTED OR STOPPED
b. An electric mattress pad while lying or sleeping in bed? YES1 NO2 (A32c)	_ AGE <1 YEAR00	_ AGE < 1 YEAR 00 STILL USING88	YES1 NO2	AGE STOPPED USING IS YOUNGER THAN REFERENCE DATE AGE OR DON'T KNOW AGE STARTED OR STOPPED
c. An electric water bed heater? YES1 NO2 (A32d)	_ AGE <1 YEAR00	 AGE <1 YEAR 00 STILL USING88	YES1 NO2	AGE STOPPED USING IS YOUNGER THAN REFERENCE DATE AGE OR DON'T KNOW AGE STARTED OR STOPPED
d. A cool-air or ultrasonic room humidifier? YES1 NO2 (A32e)	_ AGE <1 YEAR00	_ AGE < 1 YEAR 00 STILL USING88		AGE STOPPED USING IS YOUNGER THAN REFERENCE DATE AGE OR DON'T KNOW AGE STARTED OR STOPPED

A36. How many months during the reference year, that is, from (/) to (/), MO YR MO YR did (he/she) use (ITEM)? [Please include each month in which (he/she) used it at least once.]	A37. During (that/those) month(s), did (SUBJECT) use (ITEM)	A38. During (that/those) month(s), how many minutes or hours per day or week did (he/she) usually use (ITEM)?
 # MONTHS	Every day,	_ # MINS
 # MONTHS	Every day,	_ _ # MINS1 HRS2 PER DAY1 WK2
 # MONTHS	Every day,	# MINS
 # MONTHS	Every day,	

A32. [From (SUBJECT'S) birth until (REFERENCE DATE,/)], did MO YR (he/she) ever use (ITEM)?	A33. At what age did (he/she) start using the (ITEM)?	A34. At what age did (he/she) stop using the (ITEM)?	A35. When (SUBJECT) used (ITEM), did you usually turn down the heat in your home while (he/she) was sleeping?	BOX D. INTERVIEWER: SKIP ACCORDING TO REFERENCE DATE AGE AND AGES SPECIFIED IN A33. AND A34.
e. A hair dryer at home or in a hair salon? YES1 NO2 (Box E)	_ AGE < 1 YEAR00	_ AGE < 1 YEAR 00 STILL USING88		AGE STOPPED USING IS YOUNGER THAN REFERENCE DATE AGE OR DON'T KNOW AGE STARTED OR STOPPED

f.	A curling iron? YES1 NO2 (A32g)	_ AGE < 1 YEAR00	_ AGE < 1 YEAR 00 STILL USING88	YES1 NO2	AGE STOPPED USING IS YOUNGER THAN REFERENCE DATE AGE OR DON'T KNOW AGE STARTED OR STOPPED
g.	A night light in (his/her) bedroom? YES1 NO2 (Box F)	_ AGE < 1 YEAR00	_ AGE < 1 YEAR 00 STILL USING88	YES1 NO2	AGE STOPPED USING IS YOUNGER THAN REFERENCE DATE AGE OR DON'T KNOW AGE STARTED OR STOPPED

A36. How many months during the reference year, that is, from (/) to (/), MO YR MO YR did (he/she) use (ITEM)? [Please include each month in which (he/she) used it at least once.]	A37. During (that/those) month(s), did (SUBJECT) use (ITEM)	A38. During (that/those) month(s), how many minutes or hours per day or week did (he/she) usually use (ITEM)?
 # MONTHS	Every day,	

 # MONTHS	Every day,	
 # MONTHS		

A32.	A33.	A34.	A35.	BOX D.
[From (SUBJECT'S) birth	At what age did	At what age	When (SUBJECT) used	INTERVIEWER: SKIP ACCORDING
until (REFERENCE DATE,	(he/she) start	did (he/she)	(ITEM), did you usually	TO REFERENCE DATE AGE AND
/)], did	using the	stop using the	turn down the heat in	AGES SPECIFIED IN A33. AND
MO YR	(ITEM)?	(ITEM)?	your home while (he/she)	A34.
(he/she) ever use (ITEM)?			was sleeping?	

h.	A microwave iron? YES1 NO2 (A32i)	 AGE < 1 YEAR00	 AGE < 1 YEAR 00 STILL USING88	AGE STOPPED USING IS YOUNGER THAN REFERENCE DATE AGE OR DON'T KNOW AGE STARTED OR STOPPED
i.	A sound system while using a headset, including a portable radio, tape player, CD player or stereo? YES1 NO2 (A32j)	_ AGE < 1 YEAR00	_ AGE < 1 YEAR 00 STILL USING88	AGE STOPPED USING IS YOUNGER THAN REFERENCE DATE AGE OR DON'T KNOW AGE STARTED OR STOPPED
j.	A stereo sound system without using a headset YES1 NO2 (Box G)	_ AGE <1 YEAR00	_ AGE < 1 YEAR 00 STILL USING88	AGE STOPPED USING IS YOUNGER THAN REFERENCE DATE AGE OR DON'T KNOW AGE STARTED OR STOPPED

k.	A video arcade machine? YES1 NO2 (A39)	_ AGE < 1 YEAR00	_ AGE < 1 YEAR 00 STILL USING88		AGE STOPPED USING IS YOUNGER THAN REFERENCE DATE AGE OR DON'T KNOW AGE STARTED OR STOPPED
----	---	-------------------------	---	--	---

A36.	A37.	A38.
How many months during the reference year, that is, from (/) to (/), MO YR MO YR MO YR did (he/she) use (ITEM)? [Please include each month in which (he/she) used it at	During (that/those) month(s), did (SUBJECT) use (ITEM)	During (that/those) month(s), how many minutes or hours per day or week did (he/she) usually use (ITEM)?
least once.]		

_ # MONTHS	Every day,	
 # MONTHS	Every day,	
 # MONTHS	Every day,	

	Every day,1	
 # MONTHS	At least once a week or2	
# NONTES	Less than once a week? 3	

A39. Did (SUBJECT) ever watch TV during the reference year? Please include the situations listed on this card – watching TV at home, watching TV at a friend or relative's home or while at day care, playing near any television

	<u>SHOW CARD C</u> YES1				
	NO				
A40.	Including the situations listed on this card, how many minutes or hours per day or week did (SUBJECT) watch TV during the reference year? [Remember to include weekends.]				
	SHOW CARD C				

 #	HRS2	I LIX	WK2 MO3
BOXI	H.		
A40 IS < 10 MINUTES PER DAY OR	< 60 MINUTES		

Now I'll be asking you about the television set that (SUBJECT) watched **the most** during the reference year. Please include the situations listed on this card when answering these questions.

SHOW CARD C

A41. Was this a black-and-white or color television?

BLACK-AND-WHITE 1
COLOR 2

A42. What was the size of the TV screen?

SHOW CARD B

A.	5 INCHES	1	
B.	9 INCHES	2	
C.	13 INCHES	3	(A44)
D.	19 INCHES	4	(A44)
E.	26 INCHES		
F.	OTHER (SPECIFY)		$(A43 \text{ if } < 9^{\circ}, A44 \text{ if } > 9^{\circ})$

was it usually plugged	into an electrical outlet	?			
	ELECTRICITY		2		
	wledge, how old was th				ning it during the
reference year? was it					
	5 to 10 years old or		2		
			usually watcl	n or play near this	s TV during the
	 #	MIN 1 HRS 2	PER	DAY1 WK2 MO3	
How far did (SUBJECT) usually sit from this T	V? Was it			
	4 to 6 feet or		2		
	BOX I	•			
MOST WATCH	ED TV IN A41 WAS C	OLOR	1 (A4	7)	
)X J)	
		SUBJECT) regularly	watch or pla	y near a black-and	- d-white TV while
SHOW CARD C				(BOX J)	
What was the size of the	ne TV screen?				
SHOW CARD B					
B. 9 INCHESC. 13 INCHESD. 19 INCHESE. 26 INCHESF. OTHER (SPECE)	CIFY)		2 4 5 9	(A50) (A50) I (A49 if < 9", A50	if > 9") with batteries or
	To the best of your known reference year? Was it to the work of th	BATTERIES	BATTERIES ELECTRICITY	BATTERIES	BATTERIES

		BATTERIES				
		OTHER (SPECIFY)		91		
A50.	To the best of your know reference year? Was it		elevision at the time	e that (SUB	JECT) was	watching it during the
		Less than 5 years old, 5 to 10 years old or More than 10 years old?		2		
A51.	How many minutes or h reference year? [Remen			ually watch	or play nea	ar this TV during the
		 #	MIN 1 HRS 2	PER	DAY WK MO	2
A52.	How far did (SUBJECT)	usually sit from this TV?	Was it			
		Less than 4 feet,		2		
	BO: CT WAS 3 OR OLDER A CT WAS LESS THAN 3 A	T REFERENCE DATE				
A53.	Did (SUBJECT) ever use	e an electronic video gan	ne connected to a	television?		
		YES			(BOX M)	
A54.	At what age did (he/she)	start using an electronic	video game conr	nected to a	TV?	
		_ AGE				
		< 1 YEAR		00		

	 AGE			
	< 1 YEAR			
	STILL USING88			
	BOX K. REF. DATE AGE:			
	AGE STARTED USING VIDEO GAMES (A54) IS LESS THAN OR EQUAL TO REFERENCE DATE AGE AND SUBJECT STILL USING OR AGE STOPPED USING ELECTRONIC VIDEO GAMES (A55) IS EQUAL TO OR OLDER THAN REFERENCE DATE AGE			
	AGE STOPPED USING VIDEO GAMES (A55) IS YOUNGER THAN REFERENCE DATE AGE OR AGE STARTED USING VIDEO GAMES (A54) IS OLDER THAN REFERENCE DATE AGE OR DON'T KNOW IN			
	A54 AND/OR A552 (BOX M)			
	BOX L.			
	CUR IFOT WASTOLIFR TV (ASS. 4)			
	SUBJECT WACTCHED TV (A39 = 1)			
	SUBJECT DID NOT WATCH TV (A39 = 2) OR			
	A39 = DON'T KNOW			
the	ing the reference year, which TV did (SUBJECT) usually use while playing electronic video gam (color/black-and-white) television (he/she) watched the most, (or the black-and-white televisio ched) or some other TV?			
	COLOR/BLACK-AND-WHITE TV			
	WATCHED THE MOST 1 (A61)			
	BLACK-AND-WHITE TV HE/SHE			
	BLACK-AND-WHITE TV HE/SHE WATCHED2 (A61)			
	BLACK-AND-WHITE TV HE/SHE			
Wa	BLACK-AND-WHITE TV HE/SHE WATCHED2 (A61) SOME OTHER TV			
Wa	BLACK-AND-WHITE TV HE/SHE WATCHED			

	SHOW CARD B
	A. 5 INCHES 1 B. 9 INCHES 2 C. 13 INCHES 3 (A60) D. 19 INCHES 4 (A60) E. 26 INCHES 5 (A60) F. OTHER (SPECIFY) 91 (A59 if < 9", A60 if > 9")
A59.	While (SUBJECT) was playing electronic video games on this TV during the reference year, was it more ofte powered with batteries or was it usually plugged into an electrical outlet?
	BATTERIES
A60.	To the best of your knowledge, how old was this television at the time that (SUBJECT) was using it during the reference year? Was it
	Less than 5 years old,
A61.	How many months during the reference year did (SUBJECT) use electronic video games connected to a TV
	_ # MONTHS
A62.	During (that/those) month(s), did (SUBJECT) use electronic video games connected to a TV
	Every day,
A63.	How many minutes or hours per day or week did (SUBJECT) usually play electronic video games during the reference year? [Remember to include weekends.]
	MIN 1 PER DAY 1 # HRS 2 WK 2 MO 3
A64.	How far did (SUBJECT) usually sit from the screen while playing electronic video games?
	LESS THAN OR EQUAL TO 3 FEET

What was the size of the TV screen?

A58.

	SUBJECT WAS 2 OR OLDER AT REFERENCE DATE
465.	During the reference year, did (SUBJECT) use an electric clock radio that was located within 3 feet of where (he/she) was sleeping?
	YES
466 .	Did this clock have a digital or dial display?
	DIGITAL
A67.	Did (SUBJECT) ever use a personal computer (PC) or computer terminal with a monitor? Please include computers used while at home, school or anywhere else.
	YES
468 .	At what age did (he/she) start using a computer?
	 AGE
	< 1 YEAR00
469 .	At what age did (he/she) stop using a computer?
	 AGE
	< 1 YEAR
	BOX N. REF. DATE AGE:
	AGE STARTED USING COMPUTER (A68) IS LESS THAN OR EQUAL TO REFERENCE DATE AGE AND SUBJECT STILL USING OR AGE STOPPED USING (A69) IS EQUAL TO OR OLDER THAN REFERENCE DATE AGE
	AGE STOPPED USING COMPUTER (A69) IS YOUNGER THAN REFERENCE DATE AGE OR AGE STARTED USING (A68) IS OLDER THAN REFERENCE DATE AGE OR DON'T KNOW IN A68 AND/OR A69

BOX M.

A70. During the reference year, how many minutes or hours per day or week did (SUBJECT) use a computer? Please

SECTION)

	include the time(he/she) spent sitting within 3 feet of a computer while the monitor was on whether or not(he/she) was actually using it. [Remember to include weekends.]		
	MIN 1 PER DAY 1 # HRS 2 WK 2 MO 3		
A71.	Did (SUBJECT) use more than one computer on a regular basis during the reference year?		
	YES		
[READ	IF A71 = 1: Now I'll be asking about the computer (SUBJECT) used the most during the reference year.]		
A72.	Was the monitor on (the computer (he/she) used/this computer) a monochrome or a color monitor?		
	MONOCHROME		
A73.	During how many months of the reference year did (SUBJECT) use this computer?		
	 # MONTHS		
	LESS THAN 1 MONTH96		
	BOX O.		
	A70 IS < 10 MINUTES PER DAY OR < 60 MINUTES PER WEEK OR < 4 HOURS PER MONTH OR A71 = 2 OR DON'T KNOW		
	ALL ELSE		
A74.	During (that/those) month(s), how many minutes or hours per day or week did (SUBJECT) usually use this computer? [Remember to include weekends.]		
	MIN 1 PER DAY 1 # HRS 2 WK 2 MO 3		

[IF A71 = 2 (NO): skip to next section.]

Now I would like to ask you the same series of questions about the computer (SUBJECT) used **the second most** frequently.

•	•
A75.	Was the monitor on this computer a monochrome or a color monitor?
	MONOCHROME
A76.	During how many months of the reference year did (SUBJECT) use this computer?
	 # MONTHS
	LESS THAN 1 MONTH96
A77.	During (that/those) month(s), how many minutes or hours per day or week did (SUBJECT) usually use this computer? [Remember to include weekends.]
	MIN 1 PER DAY 1 # HRS 2 WK 2

MO 3